Table of Contents

Aarsman, M.E.G.: see Jonsson, L.M.V. et al., 459
Ainsworth, C.C.; Gale, M.D.; Baird, S.: The genetic control of grain esterases in hexaploid wheat. 1. Allelic variation 219
Aniel Kumar, O.: see Panda, R.C. et al., 567
Appels, R.: see May, C.E., 163
Aragoncillo, C.: see Salcedo, G. et al., 53
Azizeh Shahla: see Tsuchiya, T. et al., 433

Baenziger, P.S.: see Lazar, M.D. et al., 131
Baird, S.: see Ainsworth, C.C. et al., 219
Bashe, D.: see Mascarenhas, N.T. et al., 323
Beckert, M.; Cao Ming Qing: Results of a diallel trial and a breeding experiment for in vitro aptitude in maize 247
Benito, C.; Figueiras, A.M.; Gonzalez-Jaen, M.T.: Phosphoglucomutase – a biochemical marker for group 4 chromosomes in the Triticinae 555
Bennett, M.D.: see Payne, P.I. et al., 327
Berg, B.M. van den; Bianchi, F.; Wijsman, H.J.W.: Genetics of the peroxidase isoenzymes in *Petunia*. 7. The alleles *prxA6* and *prxA7* 25
Berg, B.M. van den; Hartings, H.; Bianchi, F.; Wijsman, H.J.W.: Genetics of the peroxidase isoenzymes in *Petunia*. 9. Immunological investigation into differential expression of *prxA* alleles 265
Berg, B.M. van den; Hendriks, T.; Oostrum, H. van; Bianchi, F.; Wijsman, H.J.W.: Genetics of the peroxidase isoenzymes in *Petunia*. 8. Flower and root peroxidases 29
Bhambhani, R.N.: see Kuspira, J., 61
Bianchi, F.: see Berg, B.M. van den et al., 25
Bianchi, F.: see Berg, B.M. van den et al., 29
Bianchi, F.: see Berg, B.M. van den, et al., 265
Biglary, M.: see Sibi, M. et al., 317
Bjørn, S.E.: see Hejgaard, J. et al., 127
Bondari, K.: Reproductive performance, growth, and survival of selected and wild × selected channel catfish 391
Bose, S.: see Sarkar, R., 415
Boulter, D.: see Mahmoud, S.H. et al., 559
Boyer, C.D.: see Schaffer, A.A. et al., 493
Bradshaw, J.E.: Computer simulation of family selection schemes suitable for kale (*Brassica oleracea* L.), involving half-sib, full-sib and selfed families 503
Brar, D.S.: see Uchimiya, H. et al., 95
Bredemeijer, G.M.M.: The role of peroxidases in pistil-pollen interactions (Review) 193
Brown, A.H.D.: see Schroeder, H.E., 101

Campbell, R.J.; Linskens, H.F.: Temperature effects of self incompatibility in *Lilium longiflorum* 259
Cao Ming Qing: see Beckert, M., 247
Cattoir-Reynearts, A.: see Negrutiu, I. et al., 11
Cermeño, M.C.: see Lacadena, J.R. et al., 75
Chen, X.: see Chu, C.C. et al., 375
Chu, C.C.; Sun, C.S.; Chen, X.; Zhang, W.X.; Du, Z.H.: Somatic embryogenesis and plant regeneration in callus from inflorescences of *Hordeum vulgare* × *Triticum aestivum* hybrids 375
Chyi, Y.S.; Sanford, J.C.; Reisch, B.I.: Further attempts to induce "egg transformation" using irradiated pollen 277
Chyi, Y.S.: see Sanford, J.C. et al., 269
Connolly, V.; Wright-Turner, R.: Induction of cytoplasmic male-sterility into ryegrass (*Lolium perenne*) 449
Cox, D.J.; Frey, K.J.: Improving cultivated oats (*Avena sativa* L.) with alleles for vegetative growth index from *A. sterilis* L. 239
Cox, T.S.: Expectations of means and genetic variances in backcross populations 35
Cox, T.S.: Genetic variance and drift in selfed and intermated populations derived from backcrossing 183
Cox, T.S.; Frey, K.J.: Genetic variation for grain yield and related traits in sorghum introgression populations 145
Csányi, V.: see Gervai, J., 481

Dahiya, B.S.; Waldia, R.S.; Kaushik, L.S.; Solanki, I.S.: Early generation yield testing versus visual selection in chickpea (*Cicer arietinum* L.) 525
Daskalov, S.: Pollen irradiation and gene transfer in *Capsicum* 135
Davies, C.S.: see Kitamura, K. et al., 253
De, K.K.; Roy, S.C.: Role of an acid phosphatase isoenzyme in callus tissue during cytodifferentiation 285
Demarly, Y.: see Sibi, M. et al., 317
Dijk, H. van: Genetic variability in *Plantago* species in relation to their ecology. 2. Quantitative characters and allozyme loci in *P. major* 43
Dijkhuis, P.: see Sree Ramulu, K. et al., 515
Dlear Rasool: see Skibinski, D.O.F. et al., 441
Du, Z.H.: see Chu, C.C. et al., 375

Ehlenfeldt, M.K.; Hanneman, R.E., Jr.: The use of Endosperm Balance Number and 2n gametes to transfer exotic germplasm in potato 155
Eisenberg, A.: see Mascarenhas, N.T. et al., 323
Erskine, W.: see Skibinski, D.O.F. et al., 441
Esser, K.: see Meinhardt, F. et al., 365

Fernando, R.L.; Gianola, D.: Rules for assortative mating in relation to selection for linear merit functions 227
Figueiras, A.M.: see Benito, C. et al., 555
Fra-Mon, P.: see Salcedo, G. et al., 53
Frey, K.J.: see Cox, D.J., 239
Frey, K.J.: see Cox, T.S., 145

Gale, M.D.: see Ainsworth, C.C. et al., 219
García-Olmedo, F.: see Salcedo, G. et al., 53
Gatehouse, J.A.: see Mahmoud, S.H. et al., 559
Gavora, J.S.; see Harris, D.L. et al., 397
Gen Yuxuan: see Li Jigeng et al., 381
Gervai, J.; Csányi, V.: Artifical gynogenesis and mapping of gene-centromere distances in the paradise fish, *Macropodus opercularis* 481
Gianfagna, T.: see Schaffer, A.A. et al., 493
Gianola, D.: see Fernando, R.L., 227
Gill, B.S.: see Lapitan, N.L.V. et al., 547
Gonzalez-Jaen, M.T.: see Benito, C. et al., 555
Gottlieb, L.D.; Higgins, R.C.: Evidence from subunit molecular weight suggests hybridization was the source of the phosphoglucose isomerase gene duplication in *Clarkia* 369
Gupta, A.K.: see Virk, D.S., 207

Hang, A.: see Tsuchiya, T. et al., 433
Hanneman, R.E., Jr.: see Ehlenfeldt, M.K., 155
Hanson, W.D.: Intergradation among Latin American maize based on an analysis of chromosome knob frequencies 347
Harada, H.: see Uchimiya, H. et al., 95
Harinarayana, G.: see Virk, D.S. et al., 509
Harris, D.L.; Gavora, J.S.; Spencer, J.L.: Genetic selection in presence of pathogens such as the lymphoid leukosis virus: computer simulation 397
Hartings, H.: see Berg, B.M. van den, et al., 265
Heberle-Bors, E.: Genotypic control of pollen plant formation in *Nicotiana tabacum* L. 475
Hejgaard, J.; Bjørn, S.E.; Nielsen, G.: Localization to chromosomes of structural genes for the major protease inhibitors of barley grains 127
Hendriks, T.: see Berg, B.M. van den et al., 29
Higgins, R.C.: see Gottlieb, L.D., 369
Hill, R.R., Jr.: see Rowe, D.E., 69
Hofmann, J.-P.: see Zivy, M. et al., 335
Holt, L.M.: see Payne, P.I. et al., 327
Hondelmann, W.: The lupin – ancient and modern crop plant 1
Honma, S.: see McCammon, K.R., 541
Hutchinson, J.: see Payne, P.I. et al., 327

Iwanaga, M.: Discovery of a synaptic mutant in potato haploids and its usefulness for potato breeding 87
Iwanaga, M.: see Tsunewaki, K. et al., 169
Izhar, S.; Tabib, Y.; Swartzberg, D.: Reciprocal transfer of male sterile and normal plasmons in *Petunia* 455

Jacobs, M.: see Negrutiu, I. et al., 11
Jonsson, L.M.V.; Aarsman, M.E.G.; Vlaming, P. de; Schram, A.W.: On the origin of anthocyanin methyltransferase isozymes of *Petunia hybrida* and their role in regulation of anthocyanin methylation 459

Kasarda, D.D.: see Lafiandra, D. et al., 531
Kaushik, L.S.: see Dahiya, B.S. et al., 525
Kaushik, L.S.; Singh, D.P.; Paroda, R.S.: Line × tester analysis for fixed effect model in cotton (*Gossypium hirsutum* L.) 487
Kawase, T.: see Kowyama, Y. et al., 297
Kitamura, K.; Davies, C.S.; Nielsen, N.C.: Inheritance of alleles for Cgy_1 and Gy_4 storage protein genes in soybean 253
Kobayashi, S.: see Uchimiya, H. et al., 95
Koch, H.: see Meinhardt, F. et al., 365
Kovačević, V.: The ear-leaf percentage of calcium and magnesium in maize inbred lines and their diallel progeny 521
Kowyama, Y.; Kawase, T.; Yamagata, H.: Cell-cycle dependency of radiosensitivity and mutagenesis in fertilized egg cells of rice, *Oryza sativa* L. 2. X-ray sensitivity and mutation rate during a cell cycle 297
Kravtsova, L.A.: see Shchapova, A.I. et al., 289
Kung, S.D.: see Lin, C.M., 213
Kuspira, J.; Bhambhani, R.N.: A simple method for estimating recombination percentages and linkage intensities from F_2 data: examples from *Triticum monococcum* and other self-fertilizing diploid plant species 61

Lacadena, J.R.; Cermeño, M.C.; Orellana, J.; Santos, J.L.: Analysis of nucleolar activity in *Agropyron elongatum*, its amphiploid with *Triticum aestivum* and the chromosome addition lines 75
Lafiandra, D.; Kasarda, D.D.; Morris, R.: Chromosomal assignment of genes coding for the wheat gliadin protein components of the cultivars 'Cheyenne' and 'Chinese Spring' by two-dimensional (two-pH) electrophoresis 531
Lapitan, N.L.V.; Sears, R.G.; Gill, B.S.: Translocations and other karyotypic structural changes in wheat × rye hybrids regenerated from tissue culture 547
Lark, K.G.: see Roth, E.J., 421
Lazar, M.D.; Baenziger, P.S.; Schaeffer, G.W.: Combining abilities and heritability of callus formation and plantlet regeneration in wheat (*Triticum aestivum* L.) anther cultures 131
Li Jayang: see Li Jigeng et al., 381
Li Jigeng; Li Yuxiang; Gen Yuxuan; Li Jayang: Two dimensional analysis of thylakoid membrane polypeptides of a barley mutant 381
Lin, C.M.; Kung, S.D.: *Nicotiana* chloroplast genome. 8. Localization of genes for subunits of ATP synthase, the cytochrome *b–f* complex and the 32 kD protein 213
Linskens, H.F.: see Campbell, R.J., 259
Li Yuxiang: see Li Jigeng et al., 381

Maekawa, M.: see Tsunewaki, K. et al., 169
Mahmoud, S.H.; Gatehouse, J.A.; Boulter, D.: Inheritance and mapping of isoenzymes in pea (*Pisum sativum* L.) 559
Mascarenhas, J.P.: see Mascarenhas, N.T. et al., 323
Mascarenhas, N.T.; Bashe, D.; Eisenberg, A.; Willing, R.P.; Xiao, C.-M.; Mascarenhas, J.P.: Messenger RNAs in corn pollen and protein synthesis during germination and pollen tube growth 323
Mathis, G.F.; Washburn, K.W.; McDougald, L.R.: Genetic variability of resistance to *Eimeria acervulina* and *E. tenella* in chickens 385
May, C.E.; Appels, R.: Seedling lethality in wheat: a novel phenotype associated with a 2RS/2BL translocation chromosome 163
McCammon, K.R.; Honma, S.: Genetics of the "umbrella" branching habit in *Capsicum annuum* L. 541
McDougald, L.R.: see Mathis, G.F. et al., 385
Meinhardt, F.; Koch, H.; Esser, K.: Compatibility groups in *Ascobolus immersus* – an indication of speciation 365
Minocha, J.L.: see Sidhu, J.S. et al., 179
Minocha, Ravi: see Sidhu, J.S. et al., 179
Molina-Cano, J.L.: see Salcedo, G. et al., 53
Morris, R.: see Lafiandra, D. et al., 531
Moss, J.P.: see Singh, A.K., 355

Narayan, R.K.J.: see Raina, S.N., 187
Negrutiu, I.; Cattoir-Reynearts, A.; Verbruggen, I.; Jacobs, M.: Lysine overproducer mutants with an altered dihydrodipicolinate synthase from protoplast culture of *Nicotiana sylvestris* (Spegazzini and Comes) 11
Nielsen, G.: see Hejgaard, J. et al., 127
Nielsen, N.C.: see Kitamura, K. et al., 253
Nitzsche, W.: see Zenkteler, M., 311
Numerova, O.M.: see Shchapova, A.I. et al., 289

Ono, M.: see Uchimiya, H. et al., 95
Oostrum, H. van: see Berg, B.M. van den et al., 29
Orellana, J.: see Lacadena, J.R. et al., 75

Panda, R.C.; Aniel Kumar, O.; Raja Rao, K.G.: Cytomorphology of induced octoploid Chili pepper (*Capsicum annuum* L.) 567
Pandey, R.M.: Genetic studies of yield contributing traits in *Amaranthus* 121

Paroda, R.S.: see Kaushik, L.S. et al., 487
Payne, P.I.; Holt, L.M.; Hutchinson, J.; Bennett, M.D.: Development and characterisation of a line of bread wheat, *Triticum aestivum*, which lacks the short-arm satellite of chromosome 1B and the *Gli-B1* locus 327
Philipp, M.: see Schou, O., 139
Potapova, T.A.: see Shchapova, A.I. et al., 289

Qian Jin: see Yan Yongshan et al., 81

Raina, S.N.; Narayan, R.K.J.: Changes in DNA composition in the evolution of *Vicia* species 187
Raja Rao, K.G.: see Panda, R.C. et al., 567
Reisch, B.I.: see Chyi, Y.S. et al., 277
Reisch, B.I.: see Sanford, J.C. et al., 269
Rick, C.M.: see Tanksley, S.D. et al., 109
Roest, S.: see Sree Ramulu, K. et al., 515
Roth, E.J.; Lark, K.G.: Isopropyl-N(3-chlorophenyl) carbamate (CIPC) induced chromosomal loss in soybean: a new tool for plant somatic cell genetics 421
Rowe, D.E.; Hill, R.R., Jr.: Effect of gametic disequilibrium on means and on genetic variances of autotetraploid synthetic varieties 69
Roy, S.C.: see De, K.K., 285

Salcedo, G.; Fra-Mon, P.; Molina-Cano, J.L.; Aragoncillo, C.; García-Olmedo, F.: Genetics of CM-proteins (A-hordeins) in barley 53
Sanford, J.C.; Chyi, Y.S.; Reisch, B.I.: Attempted "egg transformation" in *Zea mays* L., using irradiated pollen 269
Sanford, J.C.: see Chyi, Y.S. et al., 277
Sano, Y.: Differential regulation of waxy gene expression in rice endosperm 467
Santos, J.L.: see Lacadena, J.R. et al., 75
Sarkar, R.; Bose, S.: Electrophoretic characterization of rice varieties using single seed (salt soluble) proteins 415
Schaeffer, G.W.: see Lazar, M.D. et al., 131
Schaffer, A.A.; Boyer, C.D.; Gianfagna, T.: Genetic control of plastid carotenoids and transformation in the skin of *Cucurbita pepo* L. fruit 493
Schou, O.; Philipp, M.: An unusual heteromorphic incompatibility system. 3. On the genetic control of distyly and self-incompatibility in *Anchusa officinalis* L. (Boraginaceae) 139
Schram, A.W.: see Jonsson, L.M.V. et al., 459
Schroeder, H.E.; Brown, A.H.D.: Inheritance of legumin and albumin contents in a cross between round and wrinkled peas 101
Sears, R.G.: see Lapitan, N.L.V. et al., 547
Shchapova, A.I.; Potapova, T.A.; Kravtsova, L.A.; Numerova, O.M.: Karyotype stabilization in intergeneric hybrids of the subtribe Triticinae. 1. The effects of genome structure 289
Sibi, M.; Biglary, M.; Demarly, Y.: Increase in the rate of recombinants in tomato (*Lycopersicon esculentum* L.) after in vitro regeneration 317
Sidhu, J.S.; Ravi and J.L. Minocha: Peroxidase isozyme patterns in primary trisomics of pearl millet 179
Singh, A.K.; Moss, J.P.: Utilisation of wild relatives in the genetic improvement of *Arachis hypogaea* L. 5. Genome analysis in section *Arachis* and its implications in gene transfer 355
Singh, D.P.: see Kaushik, L.S. et al., 487
Singh, N.B.: see Virk, D.S. et al., 509
Singh, R.J.: see Tsuchiya, T. et al., 433
Skibinski, D.O.F.; Dlear Rasool; Erskine, W.: Aspartate aminotransferase allozyme variation in a germplasm collection of the domesticated lentil (*Lens culinaris*) 441
Solanki, I.S.: see Dahiya, B.S. et al., 525
Spencer, J.L.: see Harris, D.L. et al., 397
Sree Ramulu, K.; Dijkhuis, P.; Roest, S.: Genetic instability in protoclones of potato (*Solanum tuberosum* L. cv. 'Bintje'): new types of variation after vegetative propagation 515
Srivastava, M.: see Virk, D.S. et al., 509
Sun, C.S.: see Chu, C.C. et al., 375
Swartzberg, D.: see Izhar, S. et al., 455

Tabib, Y.: see Izhar, S. et al., 455
Tanksley, S.D.; Rick, C.M.; Vallejos, C.E.: Tight linkage between a nuclear male-sterile locus and an enzyme marker in tomato 109
Tarr, A.R.: see Taylor, I.B., 115
Taylor, I.B.; Tarr, A.R.: Phenotypic interactions between abscisic acid deficient tomato mutants 115
Teich, A.H.: Heritability of grain yield, plant height and test weight of a population of winter wheat adapted to Southwestern Ontario 21
Thiellement, H.: see Zivy, M. et al., 335
Tsuchiya, T.; Singh, R.J.; Azizeh Shahla; Hang, A.: Acrotrisomic analysis in linkage mapping in barley (*Hordeum vulgare* L.) 433
Tsuji, S.: see Tsunewaki, K. et al., 169
Tsunewaki, K.; Iwanaga, M.; Maekawa, M.; Tsuji, S.: Production and characterization of alloplasmic lines of a triticale 'Rosner' 169

Uchimiya, H.; Kobayashi, S.; Ono, M.; Brar, D.S.; Harada, H.: Characterization of nuclear and cytoplasmic information in the progeny of a somatic hybrid between male sterile *Nicotiana tabacum* and *N. glutinosa* 95

Vallejos, C.E.: see Tanksley, S.D. et al., 109
Verbruggen, I.: see Negrutiu, I. et al., 11
Vienne, D. de: see Zivy, M. et al., 335
Virk, D.S.; Gupta, A.K.: Matromorphy in *Pisum sativum* L. 207
Virk, D.S.; Singh, N.B.; Srivastava, M.; Harinarayana, G.: Regression analysis for general adaptation in pearl millet using different environmental indices 509
Vlaming, P. de: see Jonsson, L.M.V. et al., 459

Waldia, R.S.: see Dahiya, B.S. et al., 525
Washburn, K.W.: see Mathis, G.F. et al., 385
Went, J.L. van: Unequal distribution of plastids during generative cell formation in *Impatiens* 305
Wijsman, H.J.W.: see Berg, B.M. van den et al., 25
Wijsman, H.J.W.: see Berg, B.M. van den et al., 29
Wijsman, H.J.W.: see Berg, B.M. van den, et al., 265
Willing, R.P.: see Mascarenhas, N.T. et al., 323
Wright-Turner, R.: see Connolly, V., 449

Xiao, C.-M.: see Mascarenhas, N.T. et al., 323
Xi Xiahui: see Yan Yongshan et al., 81

Yamagata, H.: see Kowyama, Y. et al., 297
Yan Yongshan, Qian Jin, Xi Xiahui: Deoxycytidine reverses the suppression of nucleolar organizer regions' activity caused by BrdU 81

Zenkteler, M.; Nitzsche, W.: Wide hybridization experiments in cereals 311
Zhang, W.X.: see Chu, C.C. et al., 375
Zivy, M.; Thiellement, H.; Vienne, D. de; Hofmann, J.-P.: Study on nuclear and cytoplasmic genome expression in wheat by two-dimensional gel electrophoresis. 2. Genetic differences between two lines and two groups of cytoplasms at five developmental stages or organs 335

Book reviews 10, 24, 42, 60, 68, 86, 94, 212, 238, 390, 396, 414, 420, 432, 440, 454, 458, 474, 486, 492, 502, 514, 520, 524, 530, 540
Announcements 107, 238, 474, 540
Communication 540
Erratum 439

Indexed in Current Contents

Acknowledgements

The editors wish to thank the following external referees for their assistance

M. W. Adams (Michigan)
W. T. Adams (Oregon)
S. Arulsekar (California)
J. R. Ballington (North Carolina)
G. Barendse (Nijmegen)
M. Bennett (Cambridge)
F. Bianchi (Naarden)
A. Brandt (Copenhagen)
F. A. Chelick (South Dakota)
C. H. Chen (South Dakota)
M. T. Clegg (Georgia)
R. L. Cooper (Ohio)
T. S. Cox (Kansas)
J. F. Doebley (Brookings)
J. W. Dudley (Illinois)
M. Ferguson (South Dakota)
K. Foster (California)
L. Gábor (Szeged)
M. Goodman (North Carolina)
A. Hakim-Elaki (California)
A. R. Hallauer (Iowa)
B. J. Harrison (Norwich)
G. E. Hart (Texas)
W. Hennig (Nijmegen)
J. G. Th. Hermsen (Wageningen)
D. Q. Johnson (Iowa)
D. G. Kenefick (South Dakota)
G. J. de Klerk (Canberra)
C. Lay (South Dakota)
D. Lewis (London)
J. G. Maines (California)
S. St. Martin (Ohio)
B. J. Milfin (Rothemsted)
M. Nei (Texas)
D. H. Nielsen (South Dakota)
J. H. Ort (Minnesota)
S. Price (Ohio)
A. J. Pryor (Wisconsin)
C. O. Qualset (California)
H. Rees (Cambridge)
W. R. Russel (Illinois)
J. G. Scandalis (Raleigh, NC)
W. T. Schapaugh (Kansas)
M. C. Shannon (California)
D. V. Shaw (Alabama)
P. Shewry (Rothamsted)
O. Smith (Iowa)
J. E. Specht (California)
C. W. Stuber (North Carolina)
L. R. Teubner (California)
K. P. Vogel (Nebraska)
C. F. Wehrhahn (Vancouver)
J. F. Wendel (Brookings)
Z. W. S. Wicks (South Carolina)
L. Wösten-Scholten (Bennekom)

as well as the assistance of Mrs. Ann Jenks-Coupland and Mrs. J. Smits-Broekmans at the editorial office